

A collection of military medals and a compass are arranged on a textured, light-colored surface. In the top left, there is a red ribbon medal with a circular emblem. Below it is a blue ribbon medal with a circular emblem. To the right of these is a silver star-shaped medal with a central emblem. In the bottom left, there is a circular compass with a white face and black markings. A pair of thin-framed glasses lies horizontally across the lower middle of the image.

CRxTier

Presented to the
Information Technology Managers Council
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Tim Mehrens – Taliant Software LLP



CR – Client/Server

The old Contractor Registration (CR) system was a traditional Client/Server system with limited use of edits and business rules incorporated into the code. It was built using PowerBuilder with an Oracle Database. Much of the business process side was still manual to the extent that clients were using index cards to manage their daily workflow.



CR Client/Server - Continued

Web access by the general public was accomplished by creating an extract file of approved contractors which was converted into an Adobe Acrobat/PDF file that was copied out to a Web Server. In order to locate a contractor, the web user needed to search through an alphabetized list of 10,000+ contractors.



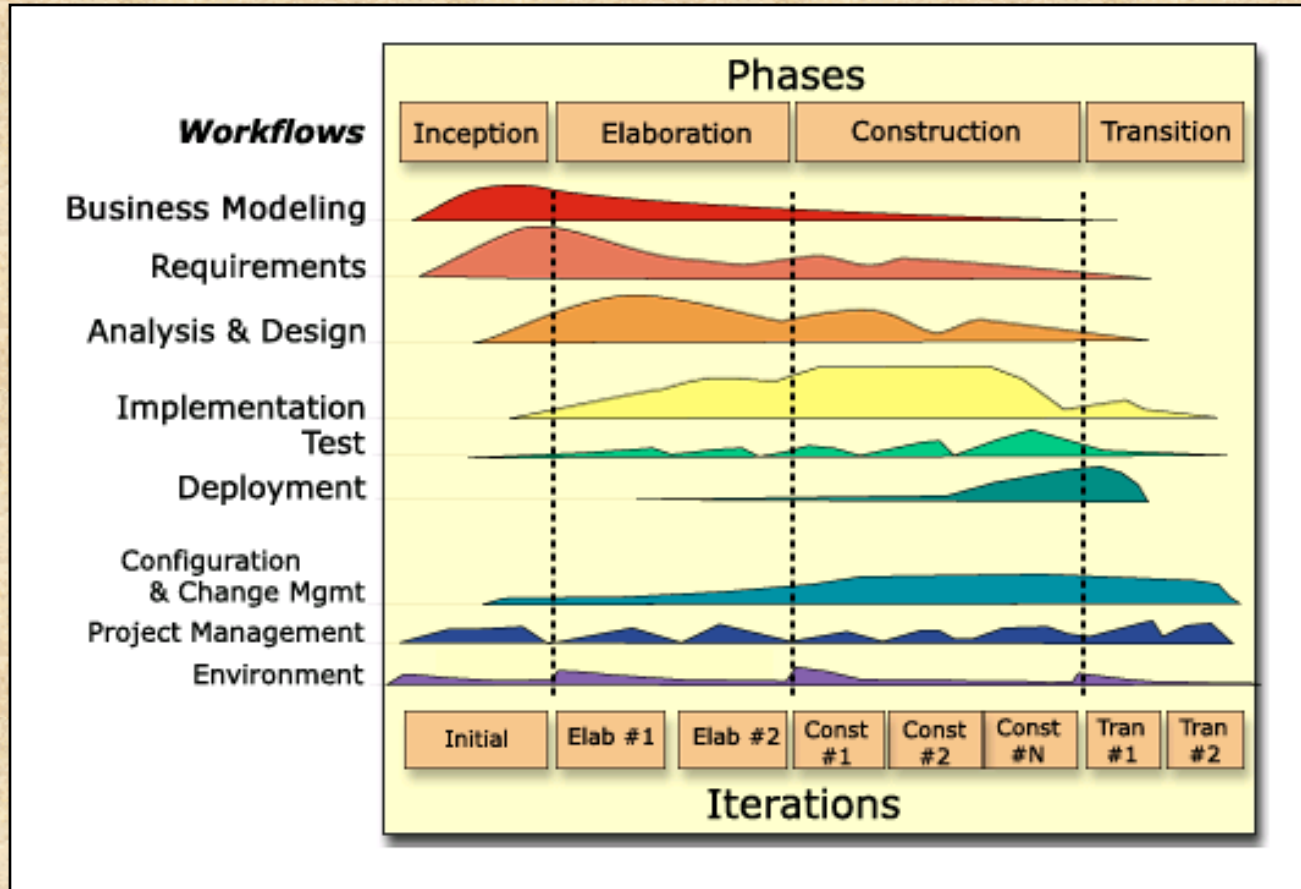
Business Opportunities

- ◆ *Provide additional functionality*
- ◆ *Resolve Database anomaly issues requiring DBA intervention*
- ◆ *Reduce development and future enhancements costs by using object oriented design methodologies*
- ◆ *Web enable portions of the system for access by the general public and contractors*

The Plan

- ◆ *Methodology – based off the Rational Unified Process(RUP)*
- ◆ *Utilized a Framework*
- ◆ *System Architecture - xTier*
 - *Client/Frontend – Provide Presentation Layer*
 - *Middle Tier – Provide Business Rules*
 - *Server/Backend – Host the Database*

Methodology





Methodology - Continued

◆ *Highlights*

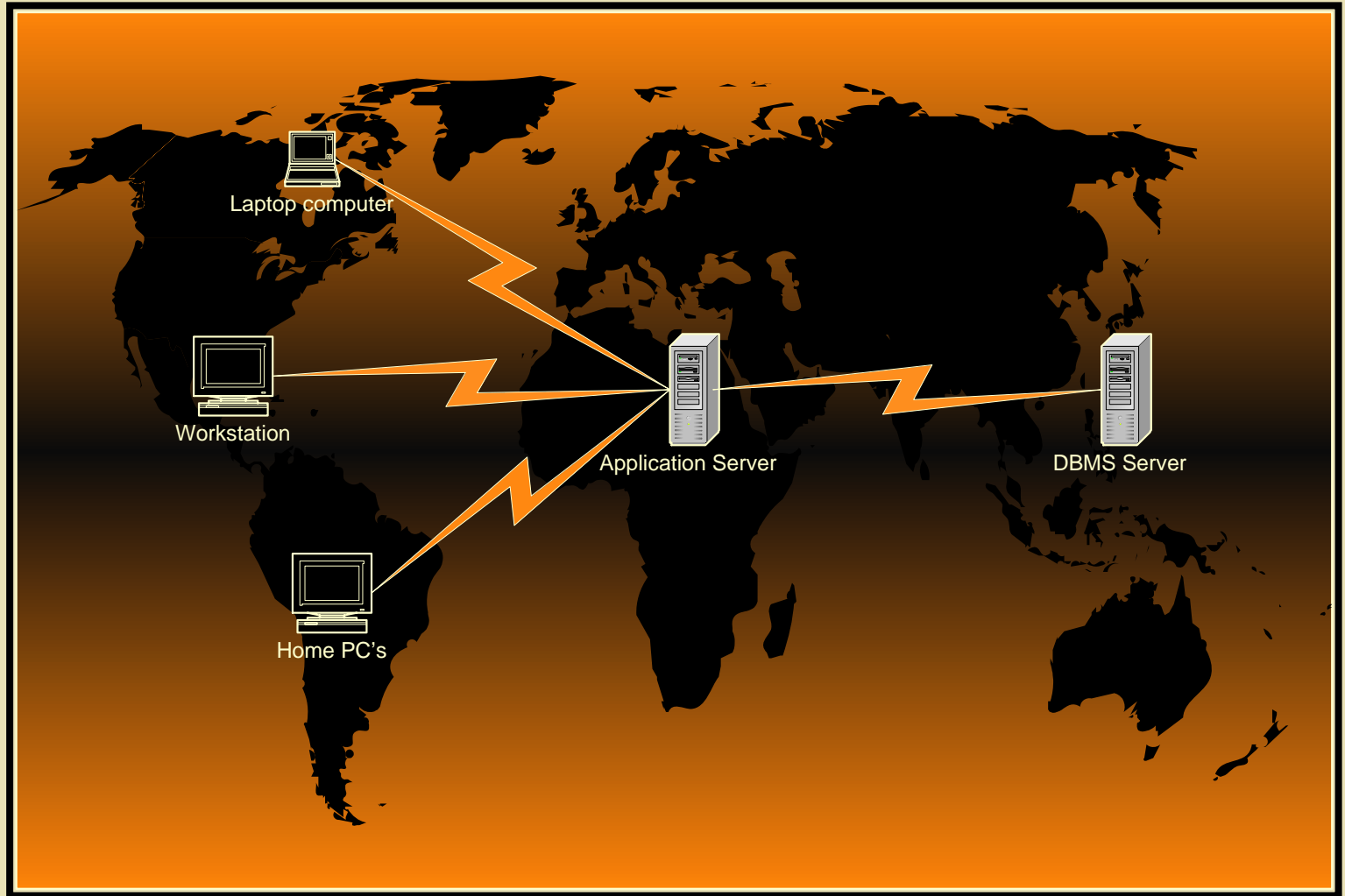
- *Development Standards*
- *Use Cases*
- *Incremental & Iterative Development*



Framework

- ◆ *Why We Used It*
 - *Got us up to speed faster on new architecture and toolsets*
 - *Enterprise Application Framework(EAF)*
 - *Community Open Source Project Managed by CynergySystems, Inc.*
 - *99% PowerBuilder Framework*
 - *Some Java used for multi-threading*

Architecture - xTier



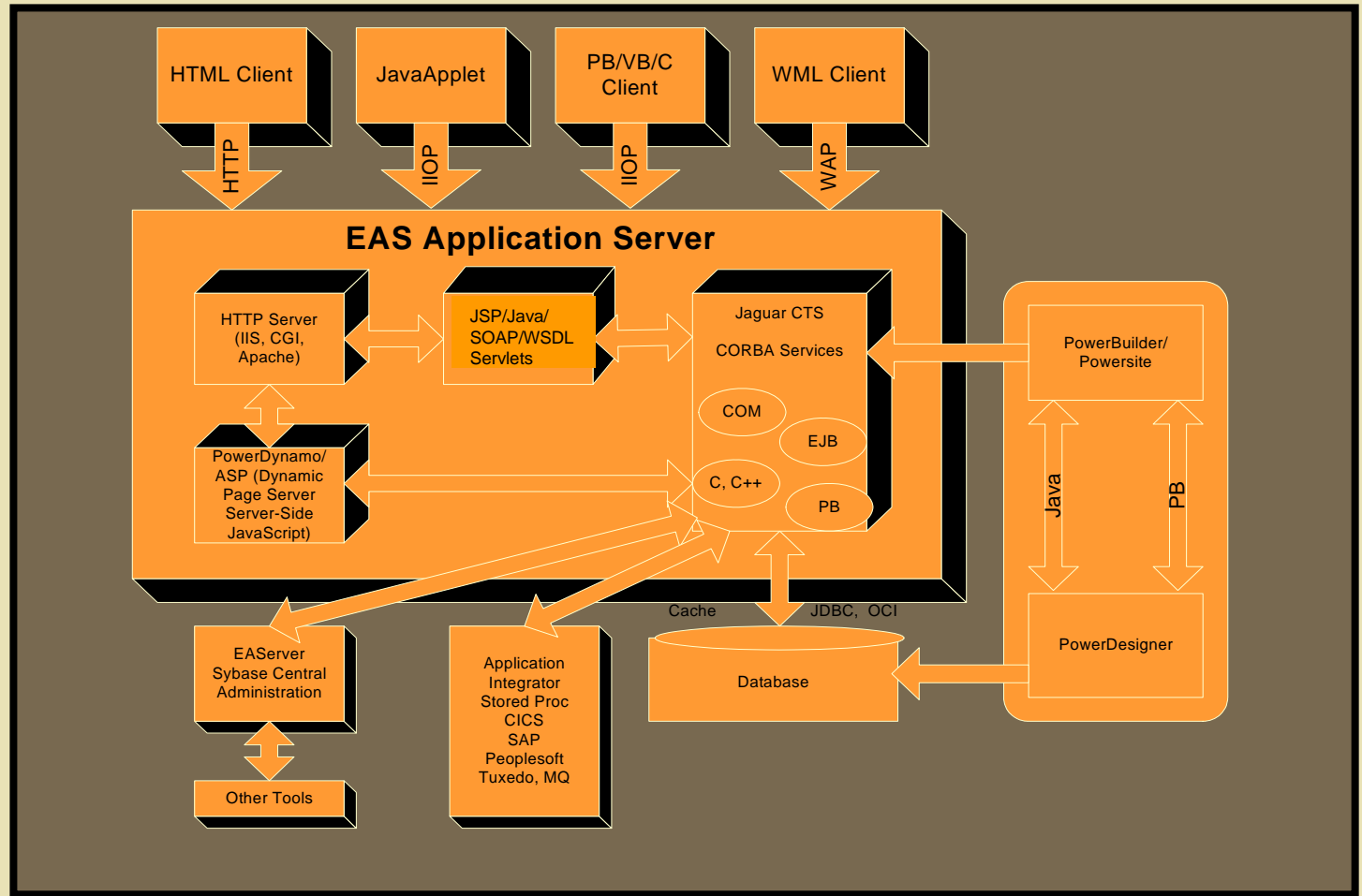


***xTier** - Continued*

- ◆ *Client workstation(s) –*
 - *Can be using Powerbuilder, Java, VB, C, C++, HTML*
 - *Communication from Client and the Application Server is a very discrete amount of data.*
- ◆ *Application Server –*
 - ◆ *Business Logic,*
 - *Component Caching,*
 - *Connection Pooling,*
 - *Data Source Access/Security,*
 - *Load Balancing,*
 - *Failover*
- ◆ *DBMS Server*
 - *.....is reduced to just that – A Data Base Management System.*

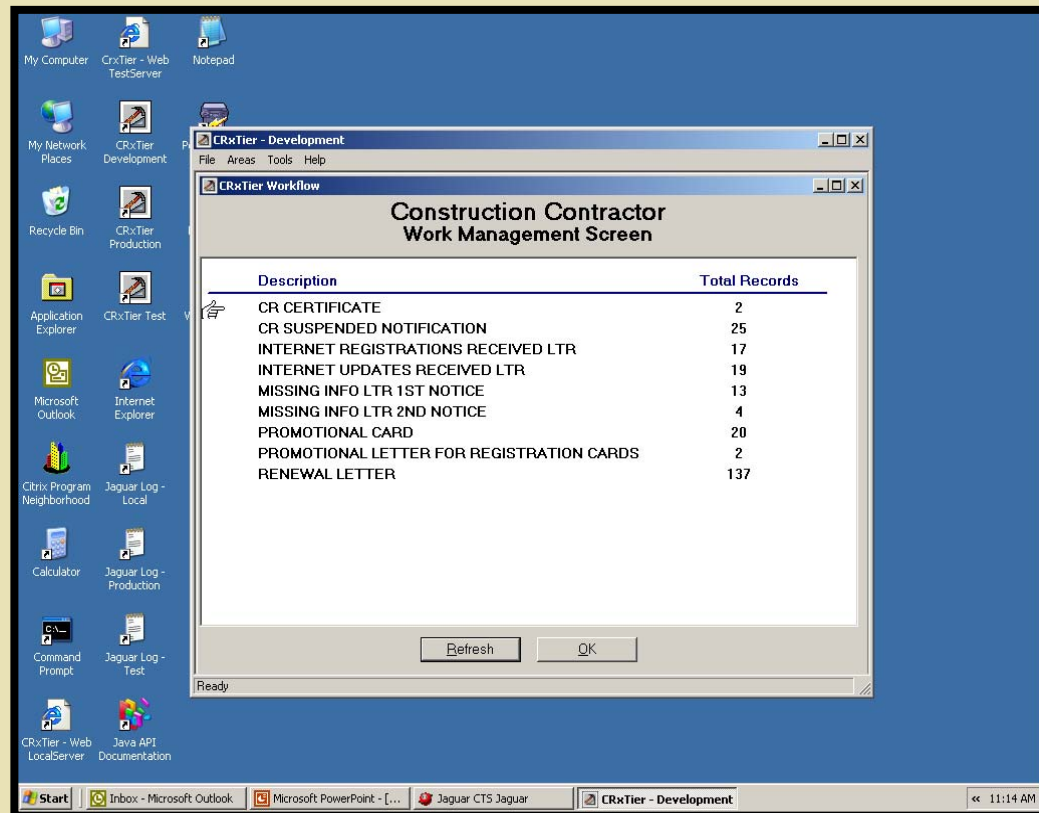
Note: Some logic remains on the database such as triggers to facilitate Database integrity

xTier - Continued



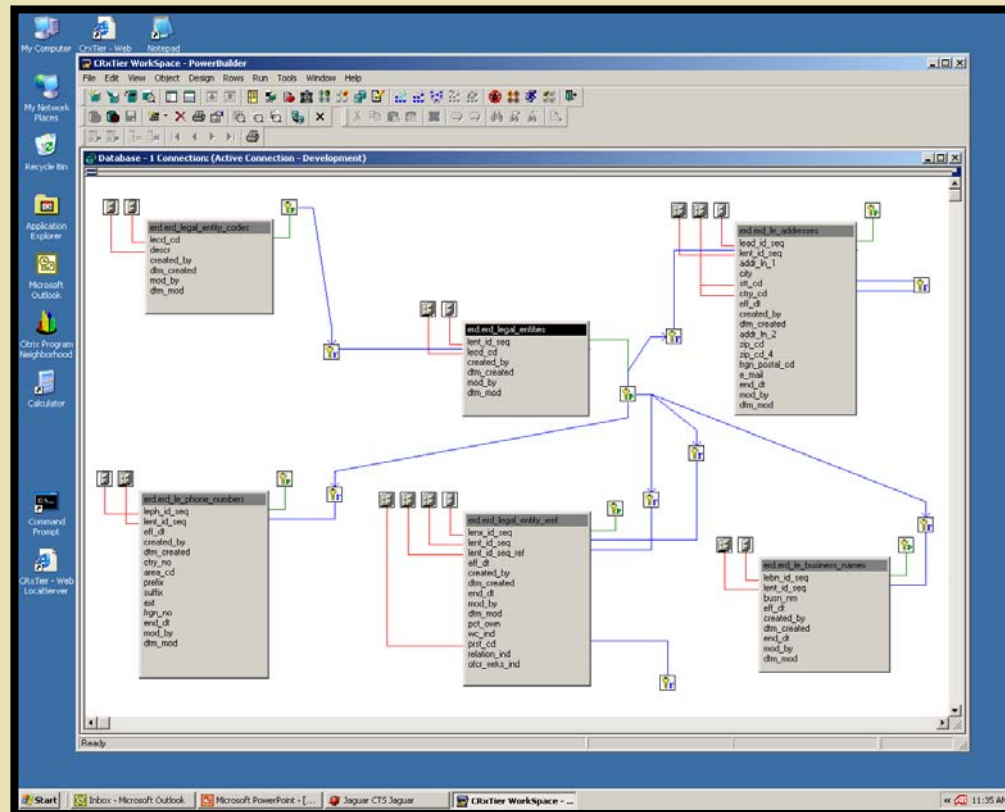
System Overview

- ◆ *Workflow is managed by a nightly batch job that produces the Contractor Registration Units correspondence and business process needs.*



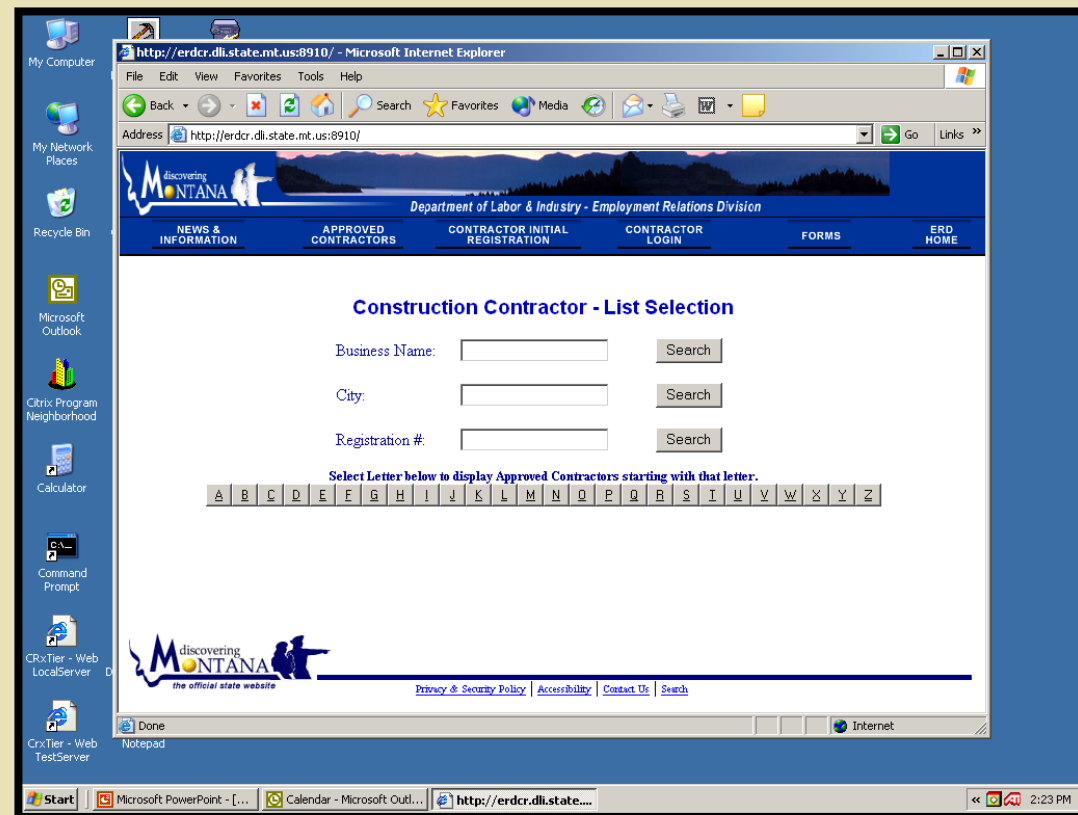
System Overview - Continued

- ◆ History is also stored on all actions taken by the batch process, internal clients and web users.



System Overview - Continued

- ◆ *The general public now has the ability to perform dynamic search's.*



System Overview - Continued

- ◆ Contractors can also now apply online or update their current registration using the web.

DLI/ERD/CR - Frame - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://erdc.dli.state.mt.us:8910/> Go Links >>

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Department of Labor & Industry - Employment Relations Division

NEWS & INFORMATION APPROVED CONTRACTORS CONTRACTOR INITIAL REGISTRATION CONTRACTOR LOGIN FORMS ERD HOME

DEMO - DEMO - DEMO - DEMO - DEMO - DEMO - DEMO - DEMO - DEMO - DEMO

Tips for usage: Do not use the browser's BACK and FORWARD buttons for navigation during the registration information gathering process!
Once this page is completed select the Next... button at the bottom of the sheet to continue.
You will be presented a summary sheet at the end to verify data entered and given the opportunity to make correction if needed.

* Indicates what columns are required.

* Is this a Bid Only Registration? ☐ Yes ☒ No

* Business Structure Type: PARTNERSHIP

* Business Name: DEMO CONSTRUCTION COMPANY

* Mailing Address: 1820 PROSPECT AV

* City: HELENA * State: MONTANA * Zip Code: 59601 +4 8011

* Phone: (406) 444 9586 Extension 0563 * Country: UNITED STATES

E-Mail: MTCONTRACTORREGISTRATION@STATE.MT.US

* Select Employee status:

☐ No Employees
☒ Employees Only
☐ Leased Employees Only
☐ Both Employees and Leased Employees

Next...

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Business Opportunities Accomplished

- ✓ *Provided additional functionality*
- ✓ *Resolved Database anomaly issues requiring DBA intervention*
- ✓ *Reduced development and future enhancements costs by using object oriented design methodologies*
- ✓ *Web enabled portions of the system for access by the general public and contractors*



Accolades

- ◆ “EAServer and PowerBuilder are a perfect fit. The combination leveraged our PowerBuilder expertise and Web-enabled our project with minimal effort.” – Clint Jatkowski, Project Manager, ERD
- ◆ “Enhancements that used to take months are accomplished in weeks” – Maggie Connor, Program Manager, ERD



Accolades - Continued

- ◆ “Time-wise, automation has made our internal process very efficient. We also don’t misplace contractor information anymore because all the records are treated consistently.” – Windy Knutson, Program Assistant III, ERD
- ◆ Featured on Sybase’s and Cynergy System’s Success Stories websites
 - http://www.sybase.com/solutions/govt/state_local
 - <http://www.cynergysystems.com/public/casestudies/>
- ◆ Link to CRxTier on the World Wide Web
 - <http://www.mtcontractor.com>



Questions

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